

THE

DAFFODIL JOURNAL



Quarterly Publication of the
AMERICAN DAFFODIL SOCIETY, Inc.

MARCH
1965

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Volume I

Number 3

MARCH, 1965

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JOHN R. LARUS, *President*

67 Wyndwood Road, West Hartford, Conn. 06107

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1120 Craig Road, Creve Coeur, Mo. 63141

For the complete current roster of Officers, Directors and chairmen of committees reference should be made to the American Daffodil Society BULLETIN issue of May, 1964.

THE DAFFODIL JOURNAL is published for delivery to members in the months of March, June, September and December.

Editor

MRS. HOWARD B. BLOOMER, JR.
"Shore Acres," Rt. 2, Box 35
Lorton, Va. 22079

Executive Editor

WILLIS H. WHEELER
3171 North Quincy St.
Arlington, Va. 22207

Articles and photographs (glossy finish) on daffodil culture and related subjects are invited from members of the Society. Manuscripts should be typewritten double-spaced, and all material should be addressed to the Executive Editor.

DEADLINE FOR THE NEXT ISSUE WILL BE APRIL 15, 1965.

SCHEDULE OF MEMBERSHIP DUES IN THE AMERICAN DAFFODIL SOCIETY

Individual Annual \$5 a year or \$12.50 for three years.

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CORRECT NAMING OF DAFFODILS FOR THE SHOW TABLE

By HELEN K. LINK, *Brooklyn, Ind.*

Since the show rules of the American Daffodil Society disqualify unnamed varieties, and well-trained judges should not give awards to specimens which are incorrectly named, it is imperative that all exhibitors learn the proper names for exhibiting blooms. Whether specimens are species or hybrids, all varieties which are alike should be entered under the same name, and that name should be the one given in the *Classified List and International Register of Daffodil Names* of The Royal Horticultural Society, and not a synonym.

Due to the interest of the miniature enthusiasts, many of the species have found a place on the show bench in recent years. The problem of correct naming is not a simple one, for bulbs of the same species may be purchased under different names, and unless the exhibitor knows the correct name, and all like species are so labeled, a show may give the public a confused impression.

In order to understand the present Royal Horticultural Society classification it is necessary to give a short resume of the history of the classification of the species, how and by whom they were classified. Several distinguished botanists have added their knowledge of the genus *Narcissus* since the time of Theophrastus (379-287 B.C.). He was known to have propagated daffodils from seed much as we do today; however, it was due to the Swedish botanist Linnaeus (1707-1778) that we now use the binomial method (genus and species) of naming plants. The daffodil is a monocotyledon, belongs to the family Amaryllidaceae, genus *Narcissus*, species *jonquilla*, *triandrus*, etc., and often followed by varietal names such as *triandrus* var. *albus*. The word *Narcissus* is the Latin name for the genus, and daffodil is the English synonym. Either name is correct when speaking of the genus.

L. H. Bailey, in his *Standard Cyclopaedia of Horticulture*, states that probably 25 or 30 species represent the original stock. In 1753 Linnaeus listed six species in his *Species Plantarum*: *poeticus*, *pseudonarcissus*, *bulbocodium*, *serotinus*, *jonquilla*, and *tazetta*. Most of the species grow naturally in central Europe and the Mediterranean region, and eastward through Asia to China and Japan. Since the time of Linnaeus many wild hybrids have been classified.

There was much confusion concerning the classification of the genus *Narcissus* until 1875, when F. W. Burbidge and J. G. Baker, in a book entitled *The Narcissus*, combined the history and culture of the daffodil into a scientific review of the genus. This work gave considerable order

to what previously had been disorder. In 1831 Haworth wrote a monograph in which he characterized 150 so-called species, classed under 16 genera. Many of these were never identified in the wild state, and Haworth actually had never seen the plants. His information had come from rather crude woodcuts of the pre-Linnean era. Baker revised Haworth's work with the idea that a group of closely related plants which resembled one another in most characteristics made up a species. Some of the attributes which he used in classification were leaf, scape, corona, divisions of perianth, stamens, style, color of flower, and time of flowering. He divided the species into three groups according to length of crown compared to length of perianth: *magnicoronatae*, *mediocoronatae*, and *parvicoronatae*. He further divided many of the species into varieties or forms.

By the year 1908 crossing and intercrossing had produced a large number of hybrids which added to the difficulty of classification according to the existing botanical arrangement. For this reason The Royal Horticultural Society set up a committee to study the formation of a classification suitable for show purposes, based mainly on comparative lengths of corona and perianth segments, and coloration. When this classification was not generally accepted, modification was necessary, and a committee revised the classification and placed all known daffodils into 11 divisions (1909).

For 40 years, except for minor changes, exhibitors used this classification. By 1950 The Royal Horticultural Society saw the need for a more simplified system of classification for show purposes, thus the *Classified List of Daffodil Names* was again revised. In 1955 the International Horticultural Congress invited The Royal Horticultural Society to become the International Registration Authority for daffodils.

Over the years what had happened to the classification of the species which comprised Haworth's and Baker's classification? In 1950 the committee placed all species and wild, or reputedly wild, forms and hybrids in Division X. In order to distinguish the species and other wild forms from garden varieties the *Classified List* prints botanical names in heavy type followed by the authority for the name. For example we find 10 *minor* L. var. *conspicuus* Haworth. The L. after the first part of the name means that this species was named by Linnaeus; the varietal name *conspicuus* was added later by Haworth. This specimen would be entered correctly in a show in Division X under the name *minor* var. *conspicuus*. This may be preceded by *N.*, the abbreviation for the generic name *Narcissus*, although this is often omitted in situations where it is taken for granted, as in the *Classified List* itself. Where a variety has had more than one name, the name which is regarded as a synonym and which is *not* recommended for general use is printed in italics. This

sometimes causes confusion, as in most publications italic type is used for all botanical names, and does not indicate that the name is incorrect.

In the *Classified List*, however, the names printed in italics are always followed by "=" and the correct name in heavy type. *N. minor* var. *conspicuus* has been given several names at different times, and a little below the listing mentioned above we find *minor* var. *nanus* (*Ajax*) Herbert = *minor* L. var. *conspicuus* Haworth. There are also listings of the same variety under *lobularis* Hort., *nanus* Hort., and *nanus* Spach., all forms that have been used but are not now considered correct. The variety may have been purchased under any one of these names, but if entered in a show it should always be entered as *minor* var. *conspicuus*. When this procedure is followed much confusion will be eliminated.

In some instances garden hybrids may be known by two names; for example, Sulphur Phoenix = Codlins and Cream. If entered in a show the specimens should also be labeled Codlins and Cream. The same specimen might also be purchased under the name *albus plenus sulphureus*. Other names often incorrectly used are: Orange Phoenix, for Eggs and Bacon; van Sion, which should be labeled *telamoni* var. *plenus*; Queen Anne's Jonquil would be exhibited correctly under the name *jonquilla* var. *flore pleno*; Angel's Tears should be *triandrus* var. *albus*; *moschatus* L. is *pseudo-narcissus* subsp. *moschatus*; Queen of Spain should be labeled *johnstonii*; and *obvallaris* is *pseudo-narcissus* subsp. *obvallaris*.

Both the exhibitor and the classification committee should check to see that local names which do not appear in the *Classified List* are not used. A common error in shows, for example, is the use of the words "jonquilla simplex." Nowhere in the *Classified List* is this name mentioned. How it originated, I do not know. It is incorrect, however, and probably the specimen is *jonquilla* L. or *odorus* L. The term jonquil is often misused. The species *jonquilla* has been placed in Division X, while its garden hybrids comprise Division VII. The word jonquil may be used popularly for the species or for varieties in Division VII, but not as a synonym for either daffodil or narcissus.

The important thing for the exhibitor to remember is that the species or hybrid, if known by more than one name, should always be entered in the show under the name given in the *Classified List* in heavy type rather than the one given in italics, which is a synonym.

FROM THE PRESIDENT'S DESK

In order to meet the printer's six weeks deadline, this is being written in mid-January, just after a four inch snowfall has been shoveled from the front walk. It is not easy to realize that, by the time these notes appear, daffodils will be blooming over all but the northern states, and we shall be under way into another season.

Last year our first outdoor bloom arrived March 27, while our latest blooming variety opened up May 17. This gave us about seven weeks during which we had garden daffodils in blossom, while by putting a few of our latest flowers dry into an icebox, we could have had cut flowers in our living room well into June.

* * *

For the dedicated exhibitor, who is primarily interested in placing on his local show table as many varieties as possible on a certain day, mid-season varieties are in greatest demand. Those varying somewhat from the norm, however, may be utilized by planting early ones in "late" situations, by deep or late planting, or even by employing cold storage on those that bloom too quickly; late ones may be correspondingly hurried in order to catch the show date. Yet a particularly precocious or sluggish bloomer presents a problem, and is *persona grata* only if the grower looks beyond purely exhibition qualifications.

For the all-around gardener, however, there is the normal desire to stretch the period of bloom as much as possible. Most catalogs indicate, either by numbers or letters, the period of bloom. Yet it must be remembered that "I", or "very early", indicates a noticeably different blooming date in the case of a miniature variety as compared with a standard.

If a grower wishes to reach for the longest possible season of bloom, he should be particularly interested in varieties that are classified as very early, and those that are designated as very late.

* * *

If bulbocodium types are dependable with you, they can be used to introduce the season. Here in central Connecticut, however, our earliest bloomers are *N. asturiensis* and Bowles's Bounty. Then, about a week later, comes Tanagra, followed in four more days by Little Beauty, Wee Bee, and *N. cyclamineus*; after a like interval, we have Hors d'Oeuvre and Rosaline Murphy, and in two more days Jetage, *N. minor pumilus*, Jana, and her sister Cornet. It is interesting that all of these varieties (except Rosaline Murphy) are of trumpet appearance, though not necessarily from Division I. It is equally noteworthy that

all are on the official miniature list except the last two, which are close to the specifications. While this does not mean that miniatures bloom uniformly ahead of standards, the general tendency is clearly noticeable.

* * *

When we come to varieties that may be used to prolong the season, our records show that Frigid, Silver Princess, and Reprieve (all in Division III) are the latest. The miniature triandrus hybrid April Tears has proved equally slow with us, but has not been found by others to be so tardy. A day or two earlier we have Lord Tedder, 2*b*, Shanach, 9, and Kidling, a miniature jonquil. Still working backward, we come to Silver Chimes (with its questionable triandrus classification), Cushlake and Dallas (both in Division III), Dactyl, 9, and the small jonquil Tittle-Tattle. The lateness of Silver Chimes, incidentally, may possibly be exaggerated, for we have been digging the bulbs each summer for storage until replanting time in early October; otherwise we get heavy leaf growth in the fall, resulting in freeze damage, and loss of bloom.

* * *

Looking back farther, we find a miscellaneous group, about half of which come from the third division—Cantabile, 9, *N. poeticus recurvus*, Golden Incense, 7, Cushendall, Shagreen, and Silvermine, all 3*c*, Corncrake and Greencastle, both 3*b*, White Sail 4, Hawera (a triandrus miniature), and Donore, our latest from Division I. Next we come upon Lough Areema, Misty Moon, and Fair Colleen, all 3*b*, and Polar Ice, Portrush, and Silver Salver, all 3*c*; in the same time group, we have the two doubles, Rose of May (which tends to blast with us), and Gay Time, together with Golden Dawn (our latest tazetta), and Tweeny, a surprisingly late miniature from Division II. As we continue to reverse the season, the standard varieties come thick and fast, with Bombay the latest in Division II, and Oconee the latest in Division V.

All these varieties have bloomed in our limited collection for at least three years. It might be of interest if Tom Throckmorton would persuade "George" to print out a list of all those rated earliest and all those rated latest, for his accommodating robot naturally has records on many more than those we grow.

* * *

When this number reaches us in early March, many of us will be on the eve of a California adventure. I hope a large number will do as we are planning: stretch the trip at one end or the other in order to take in some of the many wonders of our western coast. Don't live to regret missing our convention; live to come to it!

A happy and successful growing season to all!

—JOHN LARUS.

SHOW TIME AGAIN THROUGHOUT THE COUNTRY

March 4 or 11 (depending on season)—Red Mountain Garden Club at 2 Rockledge Road, Birmingham, Ala.; open to members only; information: Mrs. James A. Simpson, 26 Ridge Drive, Birmingham 13.

March 13, 14, 15—Southwest Regional in the Exhibition Building, Fair Park, Dallas; information: Mrs. W. D. Owen, 4565 Rheims Place, Dallas, Texas 75205.

March 25—The Russellville Garden Club at the Russellville Power & Light Co., Russellville, Ark.; information: Mrs. K. C. Ketchside, 2210 W. Main St., Russellville.

March 25, 26—Georgia State by the Atlanta Garden Center and affiliated clubs at Rich's Auditorium, Atlanta; information: Mrs. Thomas E. Tolleson, 4525 Club Dr., N.E., Atlanta, Ga. 30319.

March 26, 27—Garden Club of Virginia, 31st Show, at the Norfolk Botanical Gardens, Norfolk, Va.

March 27, 28—Oklahoma State by the ADS and the Tulsa Council of Garden Clubs in the Tulsa Garden Center, 2435 S. Peoria, Tulsa, Okla.; information: Miss Eleanor Hill, 1577 E. 22nd St., Tulsa 74114.

March 27, 28—Tennessee State by the Memphis Garden Club at Goldsmith Civic Center in Audubon Park; information: Mrs. James E. Stark, 387 Roseland Place, Memphis.

March 29—Southwest Regional Show in Little Rock, Ark., in conjunction with Regional Convention of the National Federation of Garden Clubs at the Fine Arts Center; information: Mrs. Bert Pouncey, Jr., Anoka Farms, Hughes, Ark. 72348.

March 30—The Garden Division of the Cascade Woman's Club in the Audubon Forest Methodist Church; information: Mrs. A. W. Ingram, 1515 Loch Lomond Trail, Atlanta, Ga. 30331.

April 1, 2—Whispering Pines Garden Club Council and Smyrna Chamber of Commerce at the Cobb County Center, Smyrna, Ga.; information:

Mrs. W. H. Ragsdale, 421 Woodland Brook Drive, Smyrna. Note: Smyrna has been known as the Jonquil City for a number of years. The Chamber of Commerce sponsors a week-long Jonquil Festival, which is built around their Centennial Celebration this year.

April 3—Choteau Garden Club Third Annual Show; information: Mrs. John Daly, Choteau, Okla. 74337.

April 3, 4—Huntington Council of Garden Clubs 23rd Show at the Huntington Galleries, Eighth Street Rd.; information: Mrs. Omen K. Walker, 3517 Brandon Rd., Huntington, W. Va. 25704.

April 3, 4—Tidewater Virginia Third Daffodil Show at Bethel School, Hampton, Va.; information: Franklin D. Seney, 35 Greenwood Rd., Newport News, Va.

April 7—Middle Tennessee Daffodil Society Seventh Show at Belle Meade Plaza, Harding Rd., Nashville; information: Mrs. Robert B. Cartwright, 1216 Goodloe Dr., Nashville, Tenn. 37212.

April 8, 9—French Broad River Garden Club Seventh Show in the John Cecil Room, Biltmore Dairy, Asheville, N. C.; information: Mrs. William Beckman Huger, 9 Cedarcliff Rd., Biltmore Forest, Asheville.

April 9—Clarksdale, Miss., Show at the Clarksdale Auditorium.

April 9—Kentucky State Show by the Kentucky Daffodil Society and Lexington Council of Garden Clubs in Lexington, Ky.; information: Mrs. Ray C. Hopper, 245 Henry Clay Blvd., Lexington.

April 9, 10—Thomas Jefferson Garden Club of Richmond at the Carillon, Byrd Park; information: Mrs. J. B. Guedri, 4702 Cary Street Rd., Richmond, Va.

April 10—Brown County Garden Club in the Christian Church, Nashville, Ind.; information: Mrs. F. S. Jenkins, Box 236, Helmsburg, Ind.

April 10—Shelby County Home-

makers in the Shelby County High School, Shelbyville; information: Mrs. Ben Allen Thomas, Chenoweth Farm, Shelbyville, Ky. 40065.

April 10-11—Sunrise Flower Arrangers Club of Muskogee in the Citizens National Bank; information: Mrs. Ted Schwachhofer, 2100 Haskell Blvd., Muskogee, Okla.

April 13, 14—Lookout Mountain Show by the Garden Club of Lookout Mountain at the Fairyland Club; information: Mrs. Will Harris, 1509 Chickamauga Trail, Lookout Mountain, Tenn.

April 14—Leesburg Garden Club and the Fauquier and Loudoun Garden Club co-sponsoring "The Golden Years," celebrating 50 years of growing and showing, at the Middleburg Community Center, Middleburg, Va.; information: Mrs. J. H. Cunningham, Glanville Farm, Marshall, Va.

April 20, 21—Norristown Garden Club at Central Presbyterian Church, Norristown, Pa.; information: Mrs. Robert H. Hilderbrand, Box 166, Fairview Village, Pa.

April 21—Mountain River Garden Club at the Covington Woman's Club Rooms; information: Mrs. LaRue Armstrong, Clearwater Park, Covington, Va.

April 21, 22—Maryland Daffodil Society's 42nd Show in the Baltimore Museum of Art; information: Mrs. Thomas W. Smith, Stevenson, Md.

April 23—Berwyn Garden Club of Pennsylvania at the Trinity Presbyterian Church, Main and Berwyn Ave.; information: Mrs. H. W. Bousman, 550 Hilaire Rd., St. Davids, Pa.

April 23—Chambersburg Garden Club at the Recreation Center, South Third St., Chambersburg, Pa.; information: Mrs. W. E. Culp, 639 Philadelphia Ave., Chambersburg.

April 24, 25—Dayton Council of Garden Clubs 13th Show at Dayton Power and Light Building, South Broadway, Dayton; information: Mrs.

James Razauskas, 1604 W. Alexander Bell Rd., Dayton, Ohio 45459.

April 24, 25—Midwest Regional in Indianapolis; information: Mrs. Robert Mannfeld, 3833 E. 42nd St., Indianapolis, Ind.

April 28—Tenth Annual Connecticut Show at the Greenwich Boys Club, Greenwich, Conn. There will be an admission charge and all proceeds will go to the Boys Club; information: Mrs. Hugh Petersen, Jr., Meadowcroft Lane, Greenwich.

April 29—Southside Daffodil Show at Islip, Long Island, sponsored by the Southside Garden Club of Islip; in the Parish House of St. Mark's Episcopal Church, 2-9 p.m.; information: Mrs. Patricia Egly, 101 West Bayberry Rd., Islip, L.I., N.Y. Formerly held as the Suffolk County Show, the ADS schedule will be followed.

April 30—The Garden Clubs of Harrison, Larchmont, Mamaroneck and the Ceres Club of Rye, are sponsoring a show at the Presbyterian Church, Rye, N.Y.; information: Mrs. Richmond Barton, 616 Walton Ave., Mamaroneck, N.Y.

May 1—Connecticut Horticultural Society Fourth Show at Constitution Plaza, Hartford; information: Mrs. Richard G. Willard, 199 Griswold Rd., Wethersfield, Conn. 06109.

May 4—Sixth Daffodil Day of the Northeast Region; series of speakers in the morning and in the afternoon a tour of "Springdale," the John B. Capen planting; information: Mrs. Robert L. Hoen, Dogwood Rd., Morris Plains, N.J.

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Judging Schools Scheduled

March 12—School III at the Dallas Garden Center; information: Mrs. W. D. Owen, 4565 Rheims Place, Dallas, Texas 75205.

March 28—School II at the Memphis Country Club. Registration \$6, lunch \$2.50; information: Mrs. W. L. Bankston, 5600 Shady Grove Rd., Memphis, Tenn. 38117.

FLIGHT OF THE ROBINS

By DR. GLENN DOOLEY, *Bowling Green, Ky.*

Perhaps the role of the Round Robins within the American Daffodil Society is not readily understood. There are Robins dealing with the various phases of the daffodil and its culture. The plan for the Robins calls for each member to write a letter and add it to those he receives from time to time. This set of letters constitutes the Round Robin packet. After adding his letter to the packet, each member is expected to forward it without delay to the next person on the route list accompanying the packet.

Unfortunately some of the members are careless and fail to send on the packet and the notification postal card according to schedule. Then I as director start writing letters in an attempt to find where the Robin has been stalled, and I do beg that you reply to any such letter as soon as you receive it. This kind of cooperation is necessary on the part of each member of every Robin. So, do you by chance have one of those Robins at this moment? If you do, *please* send it on its merry way without delay! At the same time please send me a postal card, telling me to whom you have sent it.

* * *

The Round Robins are intended to promote the exchange of information on the cultural behavior of the many daffodil varieties. At the same time, the wonderful friendships developed by the exchanges of letters are among our best experiences. So, an invitation is given to you to join one or more of the Robins. We would especially welcome some of the Society's directors as members.

* * *

Among some of the things of interest gleaned from the Robin letters are the following:

Meta Belle Eames of Chico, Calif., reports a life-time thrill in seeing big floats covered with thousands of daffodil blooms at Tacoma, Wash. Wouldn't this be a beautiful site for some future ADS convention?

Helen Trueblood lives in the hill country of southern Indiana. She informs us that she grows many old, old varieties on hillsides. Van Sion seems to grow exceedingly well, so that it has become one of her favorites. From her description, there would be little incentive to leave those hills in the springtime.

Berma Abercrombie of Palmetto, Ga., won an ADS ribbon on her entry of five small varieties. They were Pango, Wee Bee, Mite, *Narcissus tazetta canaliculatus*, and Halingy. She reports that she grows and blooms *canaliculatus* well and describes it as a *tazetta* type of daf-

fodil. Could this be the reason why it fails to bloom for us in the more northern areas?

Ruth Johnson of Leawood, Kan., likes Bill Pannill's method of refrigerating daffodil blooms. She places a damp bath towel in the bottom of the refrigerator. Then the daffodils in containers of water are placed on the towel. She sprays water from an old Windex spray bottle twice a day. In this way she has kept the blooms up to two weeks, and they didn't go down right after judging as so many times happens when the flowers are left in the refrigerator for so long.

* * *

In my own garden Ceylon gave an outstanding performance last spring. The cold, harsh winds battered the daffodil blooms about at a temperature of 22° F. While the stems and blooms showed the effects of the onslaught they had to endure, they did not bow to the elements. Later, in more moderate weather, I pollinated several of the blooms and harvested good seed. I also rate Woodvale highly. It has a lime-green cup and a white perianth of an outstanding quality. Coronet was an exceptionally fine early *cyclamineus*, while Jenny was by far the best of the later ones. Sweetness was without question the most outstanding jonquil.

SLIDE COLLECTIONS AVAILABLE

Three collections of color transparencies are available to members of the ADS, and through them to clubs with which they are affiliated. They are offered as follows:

1. Show-Winning Varieties—pictures of a broad selection of good varieties in all divisions.
2. Symposium Favorites.
3. Novelties and the Newer Varieties.

The rental is \$5 per set. Checks should be made payable to the American Daffodil Society, and sent with the order to L. P. Mains, 17 Lantern Lane, Spring Hill, Media, Pa.

WORK PROGRESSING ON HANDBOOK

Preparation of a daffodil handbook is proceeding on schedule, under the able direction of a former ADS president, George S. Lee, Jr. Those being asked to write the various chapters are well known in their respective fields, both in this country and in other parts of the world. The handbook will be similar in scope to those on Hollies and Peonies, issued by the American Horticultural Society in former years. We expect this publication to be out early in 1966. It will go to every member whose dues are paid up at the time. Thanks are due the American Horticultural Society for its cooperation.

HOW TO GROW A DAFFODIL SOCIETY

By JOSEPH R. NEDERBURGH, *Whittier, Calif.*

In 1956 the Los Angeles area boasted eight members of the ADS. One of these was Mrs. Kenneth (Polly) Anderson, regional vice-president. Mrs. Anderson stated in her first *Newsletter* her desire to get all the ADS members knit together somehow. The West Coast Region includes all the territory west of the Rockies, including British Columbia. It was impossible for us to get together since the area is too large and has too many climatic differences. There were also too few members in any area to start a local society for a display of daffodils.

Mrs. Anderson and Mrs. Stuart Combs put their heads together and talked of the feasibility of having a small daffodil show to try to arouse interest and perhaps gain some new members. They felt sure that in this vast region there were others interested in daffodils. They were encouraged when Miss Charlotte Hoak of Pasadena, founder of The Bulb Society and an eminent horticulturist on the West Coast, joined Mrs. Anderson and Mrs. Combs to try and stimulate interest.

The result was a small daffodil and bulb show held at Combsie's Iris and Bulb Garden in Whittier, Calif. The date of this show was March 9-19, 1957. There were not very many daffodil entries, but the show included other spring bulbs and arrangements. There were about 500 visitors and the award ribbons were home-made. No ADS ribbons were awarded that first year. The response was gratifying enough to inspire another show with ADS ribbon awards. Again other spring bulbs were included. The same was true for the third show. More people entered after the third show, March 28-29, 1959.

That small group of gardeners, whose first love was daffodils, began to have little get-togethers in homes to plan better shows and staging. They also discussed cultural practices, and experimentation with new varieties that might be suitable for southern California.

Space was scarce in Combsie's Iris and Bulb Gardens, so the problem had to be faced. Where could we have the fourth show? Enthusiasm was great. It was then that Polly Anderson took the problem to the Descanso Guild of Descanso Gardens. These gardens are part of the Los Angeles County Department of Arboreta and Botanic Gardens. A meeting was arranged with the Guild and local members, and permission was obtained to have our fourth show in Descanso Gardens. The Guild offered to reinstate as a perpetual trophy a sterling silver bowl embossed with daffodils, known as the Patricia Reynolds Trophy.

This fourth show was tremendous, with only daffodils being entered. Interested exhibitors grew to about 12 or 15. We were able to attract daffodil enthusiasts and 8,000 visitors. It appeared that we'd hit the

big time. The home meetings, usually held on Sundays, began to consist of talks on growing conditions, best varieties for this region, and pot-luck suppers.

One March Sunday in 1961 we decided to organize ourselves into the Southern California Daffodil Society. No charter, no registry, no Robert's Rules—just us. Members have joined after attending the shows, or after contacts with local nurseries and friends. In most cases it's family—husband and wife. Finally our homes proved too small to accommodate all the members, and we now hold our meetings and pot-luck suppers at the Los Angeles State and County Arboretum, the third Sunday of each month. Come join us for good food and an exchange of gardening and bulb know-how.

The 1965 Daffodil Show will be our ninth, along with the tenth ADS Convention. We hope to see you in sunny California in March. Do come and join us.

DO YOU KNOW WHERE YOU LIVE?

Probably *you* do, but it appears we have a considerable number of members who haven't let the Post Office Department in on that secret. How do we know that? The many returned copies of the first two numbers of the new JOURNAL tell the story. And that has happened within something like two months after our effort in September, 1964, to issue an up-to-date membership list.

I am informed that every one of those returned JOURNALS costs us eight cents, plus two cents an ounce when we remail it to a second address. Therefore, if any of you change your address, won't you please send a postal card to the treasurer, giving her the new address. Unfortunately, this note probably won't be read by the members who have moved without giving us their new address, and the only way we will finally discover where they are will be through a letter demanding to know why they haven't received their JOURNALS.

Incidentally, was this number of the JOURNAL addressed in the correct way? If not, won't you please correct it, even to the Zip Code. We've heard there may eventually be an additional charge for bulk mailings such as ours if the code number is not used.

If this problem of forwarding JOURNALS continues, the Publications Committee will find it necessary to ask the Board of Directors for authority to require persons concerned to furnish postage before the JOURNAL is sent to the new address. That forwarding postage will cost more than a four cent postal card to the treasurer. The Publications Committee wants to spend its budgeted publications money to improve the JOURNAL and not on unnecessary mailing costs. So, won't all of you help us?

—WILLIS H. WHEELER.

ONE MAN'S WAY OF LABELING HIS DAFFODILS

By CARL R. AMASON, *El Dorado, Ark.*

Every serious grower of daffodils has many problems in his passion to grow more and better daffodils. Not the least is keeping the proper name with the proper flower, and perhaps the year and the source of the bulbs. Labels can add very much to the garden, and can just as easily detract, and almost everyone has a different way to get the job done. As in the growing of good daffodils, success varies. The perfect label is yet to come along, but for my satisfaction the best daffodil marker is an ordinary brick. I have never seen anyone else use this system, but there is no reason why others cannot use it, too, if they wish.

To begin with, I grow lots of daffodils, really too many for best results. After the foliage dies back I mow the whole daffodil area. After a fashion, it stays mowed all summer, but not as a lawn, because it is not a true lawn. The beds are situated among thinly scattered pines; both shortleaf and loblolly are present, which are native to my area. A few redbuds, a number of flowering crabapples and dogwoods, and a single weeping flowering cherry are scattered throughout the daffodil garden. Woods are on three sides, and I have started a hedge of Korean boxwood on one side, with which I hope eventually to completely enclose the daffodil area, perhaps a whole acre. The beds are six feet wide, and the paths are also six feet wide. Lengths of the beds vary, as most were determined by the number of bulbs I had at planting time, but the overall plan is quite formal, with a design in mind that calls for long lengths of string tied to stakes.

Bricks keep the shape of the beds intact, and that is how the idea came to me to paint the daffodil names on the bricks. Now, when I order a bulb, I paint on a brick the name of the variety, source of the bulb, year obtained, and RHS classification. Yes, all this on a brick. Then when I plant a bulb I have its "tombstone" ready to put in place, and when spring comes along I have quite a bit of information on the labels. After the foliage is gone I mow over the paths, beds, and all. I have never had a single marker moved or carried away.

The bricks are lettered on one of the faces with ordinary dime store black enamel paint, using a small artist's brush that is generally sold at the same counter for a quarter. It takes me about three minutes to paint a brick that will last for five years or more. The source goes in the upper left-hand corner, followed by the year, both abbreviated. The RHS classification goes in the upper right-hand corner, preceded with an "M" if it is a miniature. The lower half is used exclusively for the

variety's name. True, some, such as Martha Washington, The Little Gentlemen, and Queen of the Bicolors, have given me trouble, so I keep a bottle of acetone and a cotton rag on hand when the painting is in process. The bricks must be dry when lettered.

When the bulbs are planted a string is stretched along the edge of the bed and the bricks are placed with only one-fourth inch or less above the soil level. Spacing of the bricks varies according to whether I have one, three, six, a dozen, or more bulbs. Generally all singles are in a place together, threes are together, and beds of fifty are planted where splashes of color would look best. I plant all miniatures separately or with the intermediates which look well with them, but I do not like the effect of mixing miniatures with standard varieties. Beds for miniatures and intermediates are five rows deep, those for standard varieties four rows, with two rows facing each path.

Most of my visitors have appreciated and commented on these tombstones during blooming time. In the summer, the orderly arrangement of the bricks perhaps does have the aspect of a cemetery, but it is neat. More than once visitors' children have suddenly interrupted the summer day's conversation to announce in excited tones that they "found where Peeping Tom and Martha Washington and whole lots of others are buried, but we just can't figure out whether they are cats or dogs!"

MITSCH NOT SERIOUSLY HIT BY FLOODS

Members will be glad to learn that Grant Mitsch was not seriously hurt by the recent floods in Oregon. He writes: "We have suffered no loss from the flood other than a little soil being washed out of our fields. . . . Many people within a few miles of us have had tragic losses. I think one reason for the terrific run-off was that two weeks ago we had a few days of the coldest weather we have had for several years, with snow falling on frozen ground, followed by a warm rain that melted the snow, there being up to eight or ten inches of rain in some areas in one week. I have not heard from Murray Evans, but he is out of reach of high water. He may have had quite a little erosion as his fields have considerable slope."

HYBRIDIZERS' FORUM

Don't Lose Those Seeds!

If one has to be away at seed harvesting time he can pick pods that are almost ripe with full-length stems and place in a jar of sweetened water to ripen indoors. The solution is a half teaspoon of sugar to one quart of water, preferably rainwater. Should a wandering dog chase a cat through the beds, beheading pods and breaking stems, immediately salvage the broken and badly bent ones, with as much stem as possible, place in the solution, and put in a sunny window in a cool spot, and some of the pods should mature as though on the plants. This remedy can be used for other bulbous plants, too, as well as for tall bearded iris. Agapanthus pods will mature in rainwater alone, even when they have been allowed to stay on the plant hardly a week from the time of pollination, and they will germinate very well.—HELEN A. GRIER.

Seed Bearers in Divisions IV to VIII

In Divisions IV to VIII a few more varieties have been reported as bearing seed. (Reports received in 1961 and 1962 were summarized in the 1963 *Yearbook*.) The additions are: 4, Golden Castle; 5a, Forty-Niner; 5b, Silver Fleece; 6a, Jack Snipe; 8, Helios, L'Innocence. In most cases the number of seeds was very small. May we have reports on the germination of some of the earlier lots reported?

—ROBERTA C. WATROUS.

Variability in Narcissus Species

In a planting of a dozen or more bulbs of many of the *Narcissus* species and wild specific varieties, it is apparent to a careful observer that there is considerable variation—in form, size, height, color, length of pistil, foliage, bloom season, vigor, etc. A species or wild specific variety is not a particular kind of plant but is a kind of plant population—the major factors of similarity, plus biogeography and genetic factors, grouping an often large number of different clones under one botanical name.

There is more variation in some *Narcissus* species than in others, and it is the fine points of difference (variation) that are of particular interest to the hybridizer. It would benefit hybridizers to study such variation closely in selecting parents. Pollen from an individual plant of *N. triandrus albus* that regularly gives four to five smooth, white florets per stem, or from a form of *N. rupicola* with rounded perianth segments as opposed to the pointed or star shaped forms, is likely

to give better progeny than mixed pollen from a number of different plants of the same species. In scores of plant genera the benefit of wise selection of individual plants (clones) for use in breeding is a well established genetical fact.—HARRY I. TUGGLE, JR.

Another Method

We covered the seed pods with little bags and harvested the seed when we returned from Europe. Many of the little bags were just on the ground but the seed and marking were O.K.

MARGARET and WALTER THOMPSON.

Pollination and Weather

Most of the failures resulted when pollination was followed within two hours by heavy rain. I have yet to see a seed set when pollination (either O. P. or crosses) was followed in two hours by a heavy rain; apparently the pollen is washed off before it has a chance to strike. This, of course, would not happen where crossed flowers were covered, but that is a refinement I have yet to practice. From what I see, I guess it takes at least four hours for pollen tubes to get near the ovary. There were many cases again this year where pollen was washed away soon after anthesis began, and before I managed to get it.—VENICE BRINK.

THE AMERICAN DAFFODIL SOCIETY LIBRARY

The Library of the American Daffodil Society is maintained at Kingwood Center, Mansfield, Ohio, and members may borrow publications by writing to the Kingwood Center Librarian. Loan period is one month, but the loan may be renewed for a second period.

Some of the more popular publications available are:

Quinn, Carey E.—*Daffodils, Outdoors and in.* 1959.

Gray, Alec—*Miniature Daffodils.* 1955.

Jefferson-Brown, M. J.—*The Daffodil, Its History, Varieties and Cultivation.* 1951.

Royal Horticultural Society—*The Daffodil and Tulip Year Book.* 1935-1939, 1946-1965.

A complete list of the library will be included in a later issue of the JOURNAL. Any questions or suggestions on the use of our library should be sent to Wells Knierim, American Daffodil Society Librarian, 31090 Providence Road, Cleveland, Ohio 44124.

AMERICAN FLOWERS NEW IN 1964 AND THEIR PRODUCERS

Those who registered new daffodils in 1964 and the names of their flowers are listed here, followed by a description of each new registration.

BRINK, Venice, 114 East Maple St., Nashville, Ill.—EMBERGLOW.

GRIER, Miss Helen A., 315 East Nutwood Ave., Fullerton, Calif.—FAR WEST, SPRING PEEPER.

ISMAY, A. L., 200 East 13th St., Fulton, Mo.—MAE TONEY.

KANOUSE, A. N., Olympia, Wash.—PINK CHIFFON.

MITSCH, Grant E., Canby, Oregon—CORAL RIBBON, DICKCISSEL, DREAM CASTLE, EMINENT, FORAY, JOYOUS, MAGIC DAWN, MOONSHOT, NEW SONG, NOWETA, PIPIT, PORTAL, PRETENDER, PROWESS, QUICK STEP, QUIVIRA, SILKEN SAILS, SMILING MAESTRO, SUNLIT HOURS, THISTLE DEW, UP FRONT.

REES, George N., Route 1, Box 36, Nixa, Mo.—GOLDEN BOY, JACQUELINE KAY.

TUGGLE, Harry I., Jr., Box 1108, Martinsville, Va.—COURT JESTER.

WATROUS, Mrs. George D., Jr. (Roberta), 5031 Reno Road, Washington 8, D. C.—CHEVY CHASE, CURLYLOCKS, FLYAWAY, WIDEAWAKE.

WILSON, TUGGLE, PANNILL; Guy L. Wilson, originator, H. I. Tuggle, Jr., and Wm. G. Pannill, owners and introducers. Box 1108, Martinsville, Va.—PRISTINE.

CHEVY CHASE (Watrous) 7b, 17", E. P. cream, C. peachy cream, fragrant. Tunis X *N. jonquilla*.

CORAL RIBBON (Mitsch) R110-2. 2b, 18", M. P. white, C. cream, about 1/8" band of coral rose. (Interim x Mabel Taylor) X Caro Nome.

COURT JESTER (Tuggle) 1b, 18", EM. P. white, C. orange-yellow, short neck. C. last after P. is past. Tunis X Fortune.

CURLYLOCKS (Watrous) 7b, 8", M. P. pale yellow, C. bright yellow. Resembles Bobbysoxer. Seville X *N. juncifolius*.

DICKCISSEL (Mitsch) T6-11. 7b, 18", M. P. sulphur yellow, C. same fading white. 2 to 3 flowers on stem. Binkie X *N. jonquilla*. Daffodil Haven 1964.

DREAM CASTLE (Mitsch) R33-49. 3c, 22", LM. P. white, C. cream becoming nearly white. Green Island X Chinese White. Daffodil Haven 1963.

EMBERGLOW (Brink) 6a, 12", M. P. deep golden yellow, reddish flush, C. deep orange-yellow, medium orange red indoors. February Gold X Rouge.

EMINENT (Mitsch) P32-1. 3b, 21", M. P. white, C. pale lemon, deeper lemon frill, greenish throat. Green Island X Bithynia. Daffodil Haven 1963.

FAR WEST (Grier) 3a, 19", E. P. medium chrome yellow, flashings of red in corona area, C. deep chrome orange, strong rim light chrome-red. Dervish X Mexico.

FLYAWAY (Watrous) 6a, 6", E. P. golden yellow, C. golden yellow, several florets to stem, fragrant. *N. cyclamineus* X *N. jonquilla*.

FORAY (Mitsch) 049-4. 2b, 20", M. P. white, C. pale yellow wide band of salmon orange, holds color well. Mabel Taylor X Interim. Daffodil Haven 1963.

GOLDEN BOY (Rees) 2a, 15", M. P. white background yellow star at base, C. lemon yellow. Pink Fancy X Mrs. R. O. Backhouse.

JACQUELINE KAY (Rees) 2b, 15", M. P. white, C. opens apricot, soon clear pink. Pink Fancy X Mrs. R. O. Backhouse.

JOYOUS (Mitsch) P62-4. 2b, 23", EM. P. white, C. pale lemon fading to creamy white. Polindra X Ludlow. Daffodil Haven 1963.

MAE TONEY (Ismay) 221, 2b, 19", M. P. white, C. lemon, white tips on edge. Parentage indefinite.

MAGIC DAWN (Mitsch) Q52-4. 2b, 19", M. P. white, C. solid apricot-pink. Striking pink, fast increase. Loch Maree X Radiation.

MOONSHOT (Mitsch) M49-35. 1a, 18", EM. P. creamy lemon, C. slightly deeper tone with pinkish tints. King of the North X Content. Daffodil Haven 1963.

NEW SONG (Mitsch) P32-9. 2b, 18", LM. P. white, C. creamy lemon with apricot suffusion. Green Island X Bithynia. Daffodil Haven 1963.

NOWETA (Mitsch) M39-4. 3b, 24", LM. P. white, C. cream with lemon frill. Green Island X Chinese White. Daffodil Haven 1964.

PINK CHIFFON (Kanouse) 4, 20", M. P. white, C. cream and buff pink. Perhaps best pink double to date, somewhat fertile. Royal Sovereign X Suda. Daffodil Haven 1963.

PIPIT (Mitsch) T6-6. 7b, 20", M. P. pale sulphur lemon, C. pale sulphur lemon fading to near white. Binkie X *N. jonquilla*.

PORTAL (Mitsch) R109-2. 2b, 21", EM. P. milk white, C. pale lemon, broad band of salmon-pink. Rose Ribbon X Caro Nome.

PRETENDER (Mitsch) P110-1. 2b, 17", M. P. white, C. pale lemon shading to cream, gray cast in throat. Good garden flower of tremendous substance. (John Evelyn x Fortune) X Green Island. Daffodil Haven 1963.

PRISTINE (Wilson, Tuggle & Pannill) 2c, 16", M. P. solid white, C. solid white short neck, strong stem. Broughshane X Greenland.

PROWESS (Mitsch) R33-43. 2b, 18", M. P. white, C. pale yellow fading to creamy buff. Green Island X Chinese White. Daffodil Haven 1962.

QUICK STEP (Mitsch) P99-20. 7b, 16", L. P. ivory white, C. ivory cream, faint pink tones at times. 3 florets to stem. Wild Rose X *N. jonquilla*.

QUIVIRA (Mitsch) R102-1. 2a, 20", EM. P. clear yellow, C. brilliant orange-red. (Clackmar x Carbineer) X Armada. Daffodil Haven 1964.

SILKEN SAILS (Mitsch) M33-10. 3b, 22", LM. P. pure white, C. grayish white, slight rim on first opening. Green Island X Chinese White. Daffodil Haven 1964.

SMILING MAESTRO (Mitsch) R106-3. 2a, 23", EM. P. rich yellow, C. orange-red. Paricutin X Armada.

SPRING PEEPER (Grier) 55-9-64-2. 6a, 19", EE. P. clean lemon yellow, C. shade deeper than P. Peeping Tom X March Sunshine.

SUNLIT HOURS (Mitsch) N115-1. 2a, 22", E. P. bright yellow, C. bright yellow. St. Issey X Galway. Daffodil Haven 1963.

THISTLE DEW (Mitsch) J3-1. 2b, 18", M. P. white, C. clear lemon yellow. Bodilly X Gold Crown. Daffodil Haven 1964.

UP FRONT (Mitsch) M49-13. 1a, 22", M. P. soft sulphury yellow, C. sulphur lemon. King of the North X Content. Daffodil Haven 1963.

WIDEAWAKE (Watrous) 7b, 8", M. P. pale yellow, C. bright yellow. Seville X *N. juncifolius*.

DAFFODILS IN 3d? WHO'S FOR TRYING?

By WALTER M. ANDRESS, *Bethel, Del.*

It is to be supposed that many members of the American Daffodil Society show the flowers they so enthusiastically grow, and as we pore over our schedules, planning and plotting for the Great Day of the show, we all come up rather short at "Division III. Small-cupped Narcissi of garden origin; (d) any color combination not falling into (a), (b), or (c)." So far this class is purely an academic dream. Yet many other "dreams" are on the way to realization, as borne witness by W. O. Backhouse and his "red" trumpets.

Why should anyone want to breed 3d's? I suppose the answer lies in the same realm as George Malloy's classic answer to the question of why he wanted to climb a mountain: "Because it is there!"

A careful perusal of the RHS *Classified List* reveals that only one 3d has been registered: "Green Elf, Hancock (Hancock) 1955." Reference to the list of raisers and stockholders reveals that Hancock was J. N. Hancock, who died in 1956. He raised daffodils at Lyndale Gardens, Glenfern Road, Fern Tree Gully, Victoria, Australia, from 1950.

I secured a double-nosed bulb of Green Elf from the present Mr. J. N. Hancock but at this writing have never flowered it; this is another tale for another time.

Perhaps the paraphernalia for climbing our mountain is available through Dr. Tom Throckmorton and "George." In correspondence, Dr. Throckmorton has offered many helpful suggestions for the possible solution of our problem. From Grant Mitsch we have Gossamer (Rubra x Foggy Dew). Foggy Dew is a sister to Chinese White. Chinese White x Foggy Dew gave us Dunlop's Greenmount. Consider, too, Grant Mitsch's Aircastle (Green Island x Chinese White) or perhaps Richardson's 3a Lemonade, also from Green Island x Chinese White. It appears that Chinese White (Silver Plane x Rinsey), its seedlings, or perhaps something of similar breeding, will provide one of the keys.

For the other parent we can consider the 1d's and 2d's—particularly the latter. These would include Bethany, Cocktail, Daydream, Fawnglo, Gleeful, Halolight, Handcross, Lemon Doric, Limeade, Nazareth, Rushlight, Pastorale, and—perhaps with the greatest potential—Binkie, as evidenced by Mitsch's use of Binkie x *N. jonquilla* to produce a reverse bicolor 7b, Dickcissel, sure proof of Binkie's value and prepotency for "reversing" in its seedlings.

The party is forming—who will join in the expedition to climb the 3d mountain?

SOUTHERN CALIFORNIA PROBLEMS

By HELEN GRIER, *Fullerton, Calif.*

The question of performance of show or exhibition varieties is brought up repeatedly at meetings of the Southern California membership, usually informally without benefit of a moderator. The number and variation of comments are enlightening, and seldom will there be any two which are in agreement.

There seems to be a belief prevalent among some that the newer novelties are more difficult to raise than are the older favorites. Others disagree. To state the newer forms are more difficult is to oppose the principle followed by the breeder—that each new introduction be an improvement over an older and similar variety.

It has been said, and proven true, that no plant is difficult to raise if its cultural requirements are met. This principle applies to orchids, daffodils or any exotic which you would care to name. If failure is experienced, the fault lies with the person in his inability to supply the conditions required by that specific variety. The factor which must be remembered, and in reality is so often forgotten, is the time required for adjustment to the new conditions, which never quite duplicate the old regardless of effort.

The same time was required by the older forms, but they have been with us so long that this is disregarded, and in our impatience we fail to take it into account when making our comparisons. This practice often leads one into making unfair and unjust criticisms of the bulb and breeder.

The time required for adjustment can often equal that necessary to grow an entire new bulb, that is to say, from four to seven years, depending on the type. This is especially true with some varieties from Divisions III and IX. The closer one meets the specific requirements of the variety the less time will be needed for adjustment.

Changes to which a new bulb must adapt are in the atmosphere, soil, water, climate and type of cultural practices employed by the owner. One of the most interesting is the adjustment to a new time schedule. This is allied to the phenomenon of the bloom period, one of the most intriguing of daffodil characteristics. The more northern regions have a shorter blooming period than does Southern California; here the period of bloom is longer with a greater distinction between the early, midseason and late stages. The adjustment to the preferred blooming date by the plant will not be noticed by the casual raiser of daffodils.

To the serious fancier who keeps a notebook, the changing process will be fascinating. He will note during the first three or four years

that the opening or blooming dates never, or hardly ever, coincide; usually the opening date will be progressively earlier, except in Divisions III and IX, when quite often the reverse will be experienced. Gradually, stabilization will result and the opening dates will be found to lie within the span of a week or less.

Some varieties are almost akin to a calendar in their regularity. Arctic Gold, Content, Diotima, Binkie, Ceylon, Polindra, Silver Chimes, Chérie, Hesla, and Actaea are in this category. Strangely, Lemon Doric, a seedling of Binkie, has yet to settle down, though it has been in the garden over five years, and in its present site three. The first year it bloomed March 25, and the date has been advancing each year since then; this past season it opened January 30.

The time of adjustment can be shortened if the bulb is left undisturbed for at least three years after its initial planting. The urge to dig after the first season to see how it is doing is understandable, and is permissible, if the bulb is not uprooted violently and moved off to another site. To scoop the soil out near the bulb to be sure of its presence and safety from infection is a precaution and not the same as the lifting, drying and moving process.

Some varieties, mainly trumpets, the whites in all divisions and the poets resent being disturbed as often as is recommended for the best blooms in some of the foreign catalogs. It must be remembered the atmosphere here has a much lower percentage of moisture than that of the overseas regions or of the Pacific Northwest; in other words the air is dry. In such an atmosphere the bulb, when out of the ground, loses much of its stored moisture through dehydration and is thereby weakened and retarded in its growth cycle. It is this factor which could be a basis for the complaint concerning the lack of stamina or the failure of performance on the part of the new bulb.

One of the challenges presented to the daffodil grower of this region is that of the high desert winds which often come at show time. To combat these winds and the accompanying low humidity, some growers have erected stake frames around which are secured gunny or muslin fabric to form screens. A spray of water is then directed onto the material, thus raising the humidity and lowering the temperature within the screened area. Care must be taken with such structures that they do not become airborne and fly like a box-kite through the beds, scattering blooms in their wake.

Some screening or protection must be given to the delicately hued, the red-cupped and white varieties if the desired tints are to be obtained without burning. However, it is better to rely on natural formations, trees, and permanent structures, such as houses and walls, than

to supply temporary structures which are subject to destruction from the winds.

One factor that is heartening and should give encouragement is that plants which are not coddled and given excessive waterings have a firmer substance and greater stamina and are better able to withstand the elements. True, the blossoms and stems will be lacking in size and strength, but the increase in substance will be most telling should the temperatures reach the mid-eighties when the specimens are on the show bench. The large lush blooms will become floppy and lose much of their sheen and crispness, and may have to be removed before the second day.

Cultural practices which produce the desired substance and color are basically simple. The soil must have a slightly acid reaction to insure the best color, and it is better to supply this condition with leaf-mold soils rather than chemicals. Acid fertilizers low in nitrogen and high in potash and phosphates, of the type sold for camellias, have proven very good here in Southern California, where the soil is of alkaline reaction and the water is hard and heavily chlorinated.

To give an example, Ceylon was first planted in a garden soil without an additional dressing of the leafmold so desired by this variety. The color was a medium orange with a deeper orange rim. The following season, after reading of Kenneth Smith's recommendations in one of the earlier *Yearbooks*, it was lifted and planted in a spot made especially to its liking. A planting mixture of coarse sand and Chinese elm leaves with a little Milorganite (fertilizer) and bonemeal added was used in a bed blocked off by stones sunk in the ground. The blooms resulting from this culture were magnificent in every respect. The cups were red from rim to perianth, not the orangey-red which so often passes for red in this region. Substance and general quality of blossom and plant were excellent.

As a further check, two years later the bulbs were returned to their original bed, and the results were a noticeable lack of color in the cups as compared to the previous two seasons. A similar test was made the following year using Mrs. R. O. Backhouse in clumps of six, leafmold soil, a sandy garden mixture, and one of a heavy consistency containing adobe were used. The results were the six bulbs planted in the leafmold soil had the best color of all the plantings, the pink having strong lavender casts in some of the blooms.

Varieties which have been able to withstand the rigors of our climate and yet remain of exhibition quality are given as suggestions, only to be used as a guide. It will be of interest to note that many of the winners in other regions will be mentioned here.

Of the trumpets, Arctic Gold is about the first to bloom and one

of the finest in form and color, though a bit smaller than its famous parent Kingscourt, which blooms a little later. Ulster Prince is good, tall and colorful. Moonmist in the paler tones is lovely, as is Moonshot, a newer introduction by the same breeder. Golden Dollar, again a darker tone, is another trumpet that has appeared in the winner's circle.

Good contrast in the bicolors of trumpet proportions is difficult to come by in conjunction with perfect form, but is being achieved with the newer introductions. Content, a most dependable variety, has held the stage for a long time, but is being displaced by such as Preamble and Frolic. The very new Descanso should become the favorite, since it is a seedling of Polindra x Frolic, and both parents do well in this region. Until that time, however, one can rest with Trousseau and Content, earlier varieties than Ballygarvey, which to date is a late bloomer and has not become too well established here. Among the whites of the trumpet division, Cantatrice still reigns supreme; it is early and has adapted to our region very well.

Vigil has yet to prove itself, but here again it may be a matter of the grower's failure to provide. Given about five to seven years to adjust and acclimate itself, and it is felt that the Empress of Ireland will prove herself.

To list all the varieties which have appeared in the winner-ring at the shows held in this region would take far too much space, but a few should be mentioned for their outstanding appearance and the comments which they elicited. Vulcan and the very similar Flaming Meteor, which made its initial appearance at Descanso in 1961 under the number R4/1, have a beautiful contrast in colors of red and yellow, both show strongly the influence of Ceylon in the parentage. Among the reverse bicolors Bethany, Daydream and Limeade are lovely, as is the earlier Nazareth. It is a most interesting fact that the pale flowers and the reverse bicolors seem to be more resistant to our weather than any of the others. Other outstanding varieties shown in Southern California have been Festivity, Statue, Tudor Minstrel, Ardour, Coloratura, Aircastle, Chinese White, Red April and Matapan.

Of the division for doubles, Riotous is the favorite for showing, with Mary Copeland and White Lion being benched only if the shows are held in the latter half of the season. Among the novelties which to date have not bloomed in time for the shows are Cara Nome, Easter Moon, Syracuse, Rose Caprice and Whitehead, but they are adjusting nicely.

In closing this account of varieties and their performance, let it be said as Confucius admonished over 2,400 years ago, "Patience is a virtue of which many speak, but few possess."

COMMERCIAL GROWING OF DAFFODILS IN THE PACIFIC NORTHWEST

By MURRAY W. EVANS, *Corbett, Oregon*

Have you ever wondered, when buying daffodil bulbs, how they are produced in volume for the trade? In a climate favorable for daffodil culture they are not especially difficult to grow, but the production of large and healthy bulbs for market is a highly specialized business.

The Evans farm is large enough to accommodate the bulb crops in about one fifth of the arable ground. Most commercial growers use a three to five year rotation program as a precaution against disease carry-over, and to allow time to clear the field of volunteers—bulbs missed during the last harvest.

As with most crops, soil selection and preparation is very important. The field is well drained, and the soil varies from heavier low bottom land to upland loam. Heavy clay is avoided. Enough humus is added to make the soil friable. Green manure (cover crops) are used for this purpose, and in some cases barnyard manure. Bulbs are never planted in ground immediately following a fresh application of barnyard manure. Usually another crop is grown, followed by bulbs the next year.

Cover crops, which consist of grains, legumes, or grasses, are turned under in the spring, then the soil is worked thoroughly several times before planting, at which time it is deeply plowed, 12 to 15 inches, and harrowed level.

Bulb stocks for planting have been inspected several times during the growing and harvesting period by state and/or county nursery inspectors, so the grower knows what treatment the stocks will need before planting.

Daffodil pests and diseases with their formidable scientific names belong in a separate article, and are beyond the scope of this one. Most daffodil fanciers, however, are familiar with the common names of some of them.

If stocks are infected with bulb and stem nematodes (eelworm) the standard treatment is immersion in water held at 111°F. for four hours. to this bath formalin (formaldehyde) is added to serve as a fungicide. In solution, the proportion is one part formalin to 200 parts water. One and a half to two hours in this same bath will destroy all bulb fly larvae and several types of mites.

A cold bath in a solution of water, chlordane, aldrin or heptachlor may also be used to control flies. Heptachlor is the most popular of these chemicals, since it requires a shorter period of immersion than the other two. Enough residue of these materials adheres to the bulb to kill the

newly hatched grub as it tries to enter the bulb the next growing season.

The water-formalin baths usually kill the spores of several forms of fungi which attack daffodil bulbs, but bulbs are sometimes dusted with fungicides in powder form. Many of these are effective, so the one used is more or less a matter of personal preference. Today the fungicides available seem to be more numerous than the diseases, but most probably each excels in the control of a specific type of fungus disease. When either hot or cold water bath is used, bulbs are planted immediately, or spread in drying trays if planting must be postponed.

Planting is a rather time-consuming and costly phase of commercial daffodil growing. To overcome some of this expense many of the larger growers have developed mechanical planters. These machines range from two-row planters, carrying a few hundred pounds of bulbs, to four-row monsters which carry a ton or more in their hoppers. Obviously, these machines are not practical for the smaller growers. Growers without planting machines open the rows with tractor drawn listing shovels, and the bulbs are set by hand. Hilling shovels or discs are then attached to the tractor and bulbs are covered.

Time of planting varies with the locality, but in the Pacific Northwest the bulk of the planting is done during September. If deemed necessary, a side dressing of commercial fertilizer such as 10-20-20 is applied as the bulbs are covered. Amounts and types of fertilizer used vary. Nitrogen is often omitted in the fall, then applied in the spring. Fertilizers with trace elements are also used. Applications of commercial fertilizer may range from 300 to 500 pounds per acre, with some exceptions.

During the winter, if he feels so disposed, the grower can busy himself cleaning, painting and repairing equipment, or building new facilities if needed—and they usually are.

No small task for those who use them is the preparation of new price lists and catalogs for the coming season. The rest of us merely try to catch up on our correspondence and try to make a few more marketing contacts.

When foliage begins to emerge, the first job to confront the grower is removal of plants showing symptoms of virus disease. Daffodils are susceptible to several of these, too, the most common being the "yellow stripe" virus. The only known method for control of virus diseases is destruction of the infected plants. Stocks must be rogued several times during the growing season. Condemned plants are burned as soon as possible after removal from the field.

Next on the agenda is weed control. If soil is dry enough, cultivation can begin soon after foliage emerges. Due to wet weather, little or no cultivating can be done some seasons until after the blooms have

opened. In wet seasons the value of the late fall hilling is realized. Weeds which survived the winter are still quite small when soil becomes dry enough to work.

A number of selective weed killing sprays are on the market and some growers use them, but most growers of our acquaintance rely on cultivation for weed control.

An application of micronized copper spray is usually crowded in between roguing and cultivating. Buds will be damaged if spray is applied after the sheath has spilt. Micronized copper is used for control of botrytis, another fungus disease which causes brownish spots on the blooms and early dieback of foliage, thus retarding growth of the bulb. One or two more applications are required after blooming and before foliage begins to die down.

Nearly all growers sell cut flowers—in fact, growers in the early districts specialize in cut flowers, and bulbs are lifted and replanted only often enough to maintain bloom quality. The cut flower market in this day of air freight and refrigerated trucks is almost nation-wide. Flowers are bunched in dozens or 25's, and are packed in any one of several sizes of cut flower shipping boxes. For local markets they are handled in orange or lettuce crates. As blooms open, those engaged in hybridizing make their crosses while flowers are fresh. If the crosses "take," seeds are harvested in six to eight weeks.

Digging of early varieties, seedlings and odd lots begins here as early as June 15. Upwards of 80 per cent of stocks probably are dug between July 1 and July 15. Most growers use modified potato diggers, usually tractor mounted. Some type of power-driven toppers or weed cutters is mounted ahead of the digger blade. With the weeds, tops and surplus soil cast to one side, bulbs are easily picked up behind the digger with a minimum of hunting and scratching for them.

A few large growers use ponderous machines which lift the bulbs, then pass them onto a conveyor where they are sorted and placed in drying trays by a crew riding the machine. Bulbs dug in this manner never touch the ground after being lifted out of the earth. Trays are stocked in the field with a cover on top to protect the bulbs from the direct rays of the sun and to shed rain, should there be any. Curing is accomplished in two or three weeks. Bulbs are then hauled into ventilated buildings for cleaning and grading. Cleaning machines are either shaker type or inclined cylinders with slots to allow the dirt and debris to fall through. Cylinders revolve and are loaded at the high end. When bulbs are discharged from the low end, they are clean enough to be graded, packed and shipped.

Grading consists mainly of separating salable or commercial bulbs from planting stock, and grading commercial bulbs into the two or

three sizes. As everyone knows, double nosed bulbs are standard commercials. Market demand is about equal for number 1 and number 2 double noses, and occasionally a few number 3 are ordered. Larger, single nosed rounds may often be substituted for the smaller sizes. Number 1 and number 2 double noses are almost sure to give two or more blooms, making them the logical types for commercial use. Mother bulbs, with three or more noses, rounds and slabs, splits, off-sets or pieces, whichever you prefer to call them, are classed as planting stock. A fat slab should make a double nose in one season's growth. During the same period a mother bulb produces from one to a half dozen slabs. Rounds usually make tight triple noses or large open double noses. There are many exceptions to these rules, notably among the poets, tazettas, miniatures and species.

Marketing daffodil bulbs is probably the most complex activity within the industry. Wholesale growers sell to seed houses, nursery firms, the forcing trade, commission brokers, and to one another. Since wholesale orders are usually large amounts—from a few hundred pounds to many tons, they are delivered by the grower's own trucks, railroad freight, or motor freight. Retail growers sell to anyone who orders from their catalogs. Individual orders being smaller, from one bulb to 100—sometimes more, they are shipped by parcel post. Shipping begins around September 1 and is usually completed by October 1, although a few orders are filled as late as November. Stocks held for sale and still unsold are replanted at the end of the shipping season.

This brings us back to where we started. The commercials are sold (we hope), the ground is prepared, planting is in progress, and a new cycle is beginning.

VIRGINIA DISPLAY GARDEN TO BE OPEN

I have been informed that Daffodil Mart's display garden will be open all spring, the peak season being late March and early April. It is located about five miles from Gloucester and 30 miles from Williamsburg, Va. There are about three acres of daffodils and other spring bulbs, many of them being naturalized in pine woods and along a ravine. The show daffodils are in formal beds. The Mart now has over 500 varieties of daffodils, and approximately 200 varieties of tulips, hyacinths, and miscellaneous spring bulbs.

Among the recent varieties added to the daffodil collection are Abalone, Accolade, Air Castle, Artist's Model, Angeles, Baccarat, Benediction, Bobolink, Coloratura, Dream Castle, Eminent, Foray, Early Mist, Honeybird, Mrs. Oscar Ronalds, New Song, Newcastle, Noweta, Oratorio, Pastorale, Pretender, Pink Chiffon, Sunlit Hours, Titania, and Vireo.—WILLIS H. WHEELER.

DAFFODIL PARENTAGE AND DATA BOOK SOON READY

Within the next 30 to 60 days a limited printing (100 copies) of all data currently recorded in the ADS Daffodil Data Bank will be available on a first-come, first-serve basis. Anticipated cost is between two and three dollars per copy, on a non-profit basis. This alphabetical listing will give name, parentage, breeder, classification, color, season of bloom, height, chromosome count (known for relatively few varieties), fertility data, and date of introduction or registration on over 3000 named daffodils. For example of format see Table 1, pg. 40, Vol. 1, No. 1 of THE DAFFODIL JOURNAL.

Make reservations immediately with: "George," Daffodil Data Bank, Computer Center, Iowa Methodist Hospital, Des Moines, Iowa.

HELP IN FIGHTING THE BULB FLY

If you are having trouble with the narcissus bulb fly, an introduced daffodil pest, send a postcard to Office of Information, U. S. Dept. of Agriculture, Washington, D. C. 20025, requesting Leaflet 444, *The Narcissus Bulb Fly*. There is no charge for single copies.

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American-raised Daffodils are one of our specialties, many of those offered in our catalog having been raised here at “Daffodil Haven.” A copy of this catalog is free to all ADS members requesting it.

Doubtless our most successful introductions have been the reverse bi-colors, with pinks and species hybrids nearly as popular; but many in other classes have been frequent winners on the show table and favorites with gardeners. Projected offerings for the near future indicate further advancements in some of these classes.

If your name is not on our mailing list and you are interested in the newer Daffodils, ask for our list.



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